OIPE

#2

```
RAW SEQUENCE LISTING              DATE: 01/03/2002
PATENT APPLICATION:  US/10/016,647   TIME: 13:41:11

     Input Set : A:\LEX-0284-USA SEQLIST.txt
     Output Set: N:\CRF3\01032002\J016647.raw
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ENTERED

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   4 <110> APPLICANT: Friddle, Carl Johan
   5         Hilbun, Erin
   6         Turner, C. Alexander Jr.
   8 <120> TITLE OF INVENTION: Novel Human Ion Channel Protein and Polynucleotides Encoding
the Same
  10 <130> FILE REFERENCE: LEX-0284-USA
  12 <140> CURRENT APPLICATION NUMBER: US/10/016,647
  12 <141> CURRENT FILING DATE: 2001-12-10
  12 <150> PRIOR APPLICATION NUMBER: US 60/257,932
  13 <151> PRIOR FILING DATE: 2000-12-20
  15 <160> NUMBER OF SEQ ID NOS: 3
  17 <170> SOFTWARE: FastSEQ for Windows Version 4.0
  19 <210> SEQ ID NO: 1
  20 <211> LENGTH: 1278
  21 <212> TYPE: DNA
  22 <213> ORGANISM: homo sapiens
  24 <400> SEQUENCE: 1
  25 atgaccttcg ggcgcagcgg ggcggcctcg gtggtgctga acgtgggcgg cgcccggtat      60
  26 tcgctgtccc gggagctgct gaaggacttc ccgctgcgcc gcgtgagccg gctgcacggc     120
  27 tgccgctccg agcgcgacgt gctcgaggtg tgcgacgact acgaccgcga gcgcaacgag     180
  28 tacttcttcg accggcactc ggaggccttc ggcttcatcc tgctctacgt gcgcggccac     240
  29 ggcaagctgc gcttcgcgcc gcggatgtgc gagctctcct tctacaacga gatgatctac     300
  30 tggggcctgg agggcgcgca cctcgagtac tgctgccagc gccgcctcga cgaccgcatg     360
  31 tccgacacct acaccttcta ctcggccgac gagccgggcg tgctgggccg cgacgaggcg     420
  32 cgccccggcg gggccgaggc ggctccctcc aggcgctggc tggagcgcat gcggcggacc     480
  33 ttcgaggagc ccacgtcgtc gctggccgcg cagatcctgg ctagcgtgtc ggtggtgttc     540
  34 gtgatcgtgt ccatggtggt gctgtgcgcc agcacgttgc ccgactggcg caacgcagcc     600
  35 gccgacaacc gcagcctgga tgaccggagc aggataattg aagctatctg cataggttgg     660
  36 ttcactgccg agtgcatcgt gaggttcatt gtctccaaaa caagtgtga gtttgtcaag     720
  37 agacccctga acatcattga tttactggca atcacgccgt attacatctc tgtgttgatg     780
  38 acagtgttta caggcgagaa ctctcaactc cagagggctg gagtcacctt gagggtactt     840
  39 agaatgatga ggattttttg ggtgattaag cttgcccgtc acttcattgg tcttcagaca     900
  40 ctcggtttga ctctcaaacg ttgctaccga gagatggtta tgttacttgt cttcatttgt     960
  41 gttgccatgg caatctttag tgcactttct cagcttcttg aacatgggct ggacctggaa    1020
  42 acatccaaca aggactttac cagcattcct gctgcctgct ggtgggtgat tatctctatg    1080
  43 actacagttg gctatggaga tatgtatcct atcacagtgc ctggaagaat tcttggagga    1140
  44 gtttgtgttg tcagtggaat tgttctattg gcattaccta tcactttttat ctaccatagc    1200
  45 tttgtgcagt gttatcatga gctcaagttt agatctgcta ggtatagtag gagcctctcc    1260
  46 actgaattcc tgaattaa                                                  1278
  48 <210> SEQ ID NO: 2
  49 <211> LENGTH: 425
  50 <212> TYPE: PRT
  51 <213> ORGANISM: homo sapiens
  53 <400> SEQUENCE: 2
  54 Met Thr Phe Gly Arg Ser Gly Ala Ala Ser Val Val Leu Asn Val Gly
  55  1               5                   10                  15
  56 Gly Ala Arg Tyr Ser Leu Ser Arg Glu Leu Leu Lys Asp Phe Pro Leu
  57              20                  25                  30
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PATENT APPLICATION: US/10/016,647   TIME: 13:41:11

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Output Set: N:\CRF3\01032002\J016647.raw

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 58 Arg Arg Val Ser Arg Leu His Gly Cys Arg Ser Glu Arg Asp Val Leu
 59         35              40                  45
 60 Glu Val Cys Asp Asp Tyr Asp Arg Glu Arg Asn Glu Tyr Phe Phe Asp
 61     50              55                  60
 62 Arg His Ser Glu Ala Phe Gly Phe Ile Leu Leu Tyr Val Arg Gly His
 63 65              70              75                  80
 64 Gly Lys Leu Arg Phe Ala Pro Arg Met Cys Glu Leu Ser Phe Tyr Asn
 65              85              90                  95
 66 Glu Met Ile Tyr Trp Gly Leu Glu Gly Ala His Leu Glu Tyr Cys Cys
 67             100             105                 110
 68 Gln Arg Arg Leu Asp Asp Arg Met Ser Asp Thr Tyr Thr Phe Tyr Ser
 69         115             120                 125
 70 Ala Asp Glu Pro Gly Val Leu Gly Arg Asp Glu Ala Arg Pro Gly Gly
 71     130             135                 140
 72 Ala Glu Ala Ala Pro Ser Arg Arg Trp Leu Glu Arg Met Arg Arg Thr
 73 145             150             155                 160
 74 Phe Glu Glu Pro Thr Ser Ser Leu Ala Ala Gln Ile Leu Ala Ser Val
 75             165             170                 175
 76 Ser Val Val Phe Val Ile Val Ser Met Val Val Leu Cys Ala Ser Thr
 77             180             185                 190
 78 Leu Pro Asp Trp Arg Asn Ala Ala Ala Asp Asn Arg Ser Leu Asp Asp
 79         195             200             205
 80 Arg Ser Arg Ile Ile Glu Ala Ile Cys Ile Gly Trp Phe Thr Ala Glu
 81     210             215             220
 82 Cys Ile Val Arg Phe Ile Val Ser Lys Asn Lys Cys Glu Phe Val Lys
 83 225             230             235                 240
 84 Arg Pro Leu Asn Ile Ile Asp Leu Leu Ala Ile Thr Pro Tyr Tyr Ile
 85             245             250                 255
 86 Ser Val Leu Met Thr Val Phe Thr Gly Glu Asn Ser Gln Leu Gln Arg
 87             260             265                 270
 88 Ala Gly Val Thr Leu Arg Val Leu Arg Met Met Arg Ile Phe Trp Val
 89         275             280             285
 90 Ile Lys Leu Ala Arg His Phe Ile Gly Leu Gln Thr Leu Gly Leu Thr
 91     290             295             300
 92 Leu Lys Arg Cys Tyr Arg Glu Met Val Met Leu Leu Val Phe Ile Cys
 93 305             310             315                 320
 94 Val Ala Met Ala Ile Phe Ser Ala Leu Ser Gln Leu Leu Glu His Gly
 95             325             330                 335
 96 Leu Asp Leu Glu Thr Ser Asn Lys Asp Phe Thr Ser Ile Pro Ala Ala
 97             340             345                 350
 98 Cys Trp Trp Val Ile Ile Ser Met Thr Thr Val Gly Tyr Gly Asp Met
 99         355             360             365
100 Tyr Pro Ile Thr Val Pro Gly Arg Ile Leu Gly Gly Val Cys Val Val
101     370             375             380
102 Ser Gly Ile Val Leu Leu Ala Leu Pro Ile Thr Phe Ile Tyr His Ser
103 385             390             395                 400
104 Phe Val Gln Cys Tyr His Glu Leu Lys Phe Arg Ser Ala Arg Tyr Ser
105             405             410                 415
106 Arg Ser Leu Ser Thr Glu Phe Leu Asn
```

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PATENT APPLICATION: US/10/016,647   TIME: 13:41:11

Input Set : **A:\LEX-0284-USA SEQLIST.txt**
Output Set: **N:\CRF3\01032002\J016647.raw**

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109 <210> SEQ ID NO: 3
110 <211> LENGTH: 1844
111 <212> TYPE: DNA
112 <213> ORGANISM: homo sapiens
114 <400> SEQUENCE: 3
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116 cccggcggct ccattcggcg cccgcagccc tcagggggtc ggccccgcgg cttgggagag     120
117 ggcaccgcgg cctcggtgtg cgcagccctc gggcgcgagg gtcggcggcg cggacacagc     180
118 cgcgttccca gccggtgggg ctcagcgctg gcgccggcga ggactccccg gccacccgca     240
119 ggtaccgccg ggcggagggc gcgctactag cagcgccgga gatactcgag cccagggacc     300
120 cccgggccag cggagggcag gagcggagcc ccgagggagc gcgggccccg acggcgcgct     360
121 cccccgtcag ccacgggcag gcaggccccg cgtggcggct tggggtgggg ggctgcagcg     420
122 gggccctcgg gccgaaagtc ccccgggcgg ccagccatga ccttcgggcg cagcggggcg     480
123 gcctcggtgg tgctgaacgt gggcggcgcc cggtattcgc tgtcccggga gctgctgaag     540
124 gacttcccgc tgcgccgcgt gagccggctg cacggctgcc gctccgagcg cgacgtgctc     600
125 gaggtgtgcg acgactacga ccgcgagcgc aacgagtact tcttcgaccg gcactcggag     660
126 gccttcggct tcatcctgct ctacgtgcgc ggccacggca agctgcgctt cgcgccgcgg     720
127 atgtgcgagc tctccttcta caacgagatg atctactggg gcctggaggg cgcgcacctc     780
128 gagtactgct gccagcgccg cctcgacgac cgcatgtccg acacctacac cttctactcg     840
129 gccgacgagc cgggcgtgct gggccgcgac gaggcgcgcc ccggcggggc cgaggcggct     900
130 ccctccaggc gctggctgga gcgcatgcgg cggaccttcg aggagcccac gtcgtcgctg     960
131 gccgcgcaga tcctggctag cgtgtcggtg gtgttcgtga tcgtgtccat ggtggtgctg    1020
132 tgcgccagca cgttgcccga ctggcgcaac gcagccgccg acaaccgcag cctggatgac    1080
133 cggagcagga taattgaagc tatctgcata ggttggttca ctgccgagtg catcgtgagg    1140
134 ttcattgtct ccaaaaacaa gtgtgagttt gtcaagagac ccctgaacat cattgattta    1200
135 ctggcaatca cgccgtatta catctctgtg ttgatgacag tgtttacagg cgagaactct    1260
136 caactccaga gggctggagt caccttgagg gtacttagaa tgatgaggat tttttgggtg    1320
137 attaagcttg cccgtcactt cattggtctt cagacactcg gtttgactct caaacgttgc    1380
138 taccgagaga tggttatgtt acttgtcttc atttgtgttg ccatggcaat ctttagtgca    1440
139 ctttctcagc ttcttgaaca tgggctggac ctggaaacat ccaacaagga ctttaccagc    1500
140 attcctgctg cctgctggtg ggtgattatc tctatgacta cagttggcta tggagatatg    1560
141 tatcctatca cagtgcctgg aagaattctt ggaggagttt gtgttgtcag tggaattgtt    1620
142 ctattggcat tacctatcac ttttatctac catagctttg tgcagtgtta tcatgagctc    1680
143 aagtttagat ctgctaggta tagtaggagc ctctccactg aattcctgaa ttaatgcatt    1740
144 gcaaatcaat tcttgcatac acttcataga aagactttga tgctgcttca tatttatgtg    1800
145 tttcttgctg ggtgagcact gcagtggcat tgtcatcatc ttgg                     1844
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VERIFICATION SUMMARY   DATE: 01/03/2002
PATENT APPLICATION: US/10/016,647   TIME: 13:41:12

Input Set : **A:\LEX-0284-USA SEQLIST.txt**
Output Set: **N:\CRF3\01032002\J016647.raw**

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date